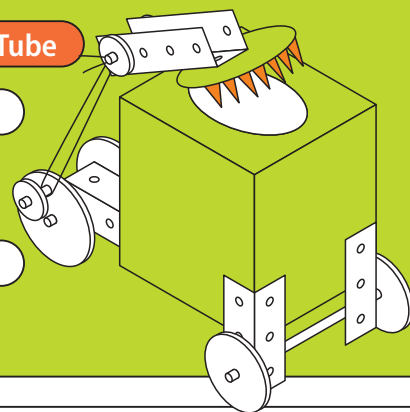




Visit TechCard at techcard.co.uk & Instagram & YouTube

Tissue Box Monster

Maker Pack: Skill Level ● ● ● ● ○



Build a scary monster that snaps its jaws as it moves forward!

Explore mechanisms like cams, levers and wheels and axles.

See how to make with TechCard on our website.



A cam at the back of the model operates the jaw.

The jaw snaps open and closed as the box moves forward.

The box rolls forward on its wheels.

Assembly videos on YouTube!

Parts to make 1 model

Structural Parts

TechCard Girder	1
TechCard Beam	1

Mechanical Parts

25mm Disc	4
50mm Wheel	2
60mm Wheel	2
300mm Dowel Axle	1

Additional Materials

400mm thin string.
Upcycled box about 120mm x 110mm x 100mm.
Thin card, paints, pipe cleaners, lolly sticks, upcycled bottle tops and packaging.

You will have parts left over towards other models.

Parts to make 10 models

Structural Parts

TechCard Girder	10
TechCard Beam	10

Mechanical Parts

25mm Disc	40
50mm Wheel	20
60mm Wheel	20
300mm Dowel Axle	10

Additional Materials

4M thin string.
10 x Upcycled boxes about 120mm x 110mm x 100mm.
Thin card, paints, pipe cleaners, lolly sticks, upcycled bottle tops and packaging.

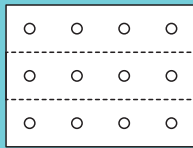
Based on pupils sharing off-cuts between them.

Make the Tissue Box Monster



Before you start see
'Make with TechCard'
on our website.

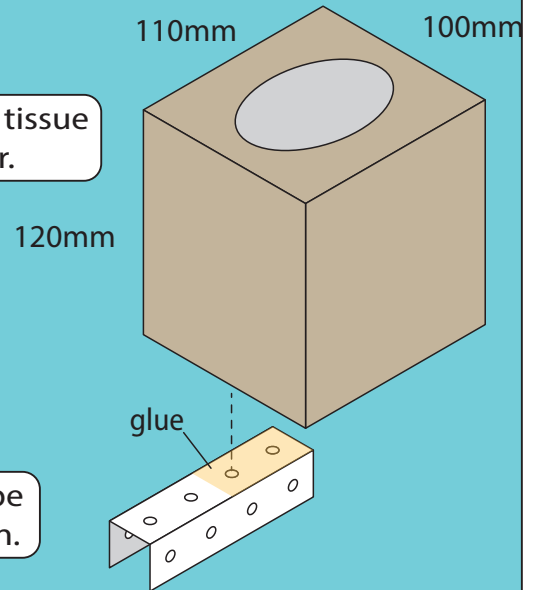
1 Make the chassis.



Cut a 100mm
beam.

Use a square tissue
box or similar.

Fold the beam to shape
and glue where shown.

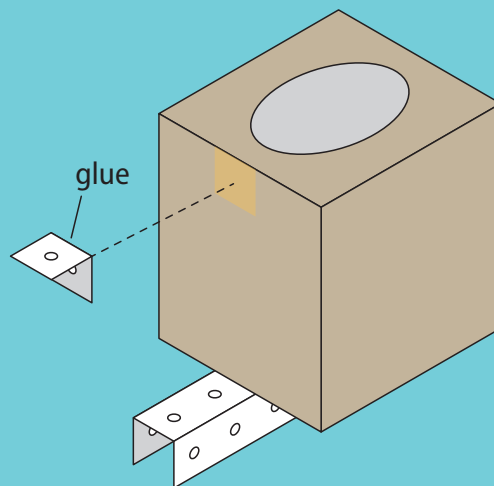


2 Make the hinge.



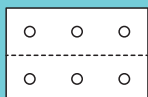
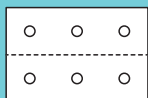
Cut a 25mm
girder.

Fold the girder
to shape.



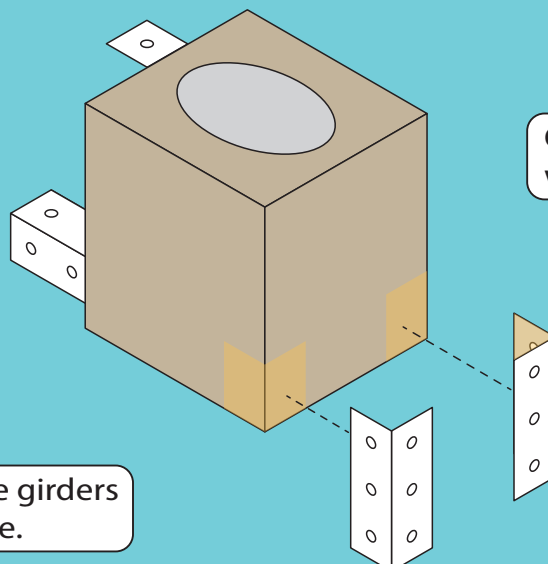
Glue the girder
where shown.

3 Fit the legs.



Cut two 75mm
girders.

Fold the girders
to shape.



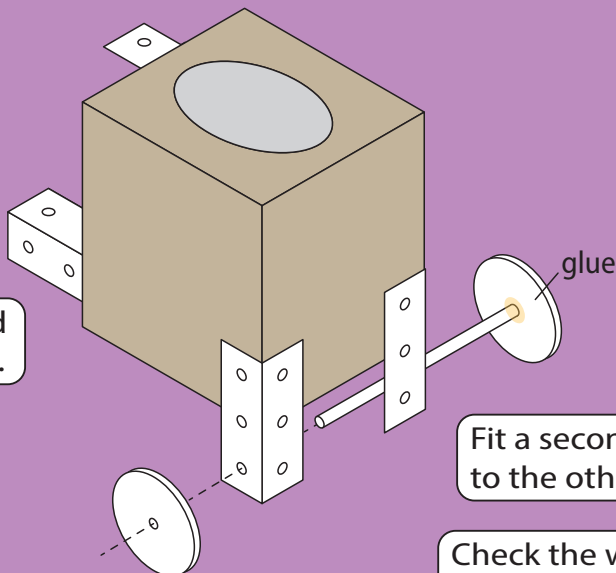
Glue the girders
where shown.

4 Fit the front axle.



Cut an axle so it is 20mm longer than the box.

Fit a 50mm wheel to one end and pass the axle through the girders.



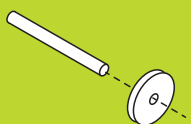
Fit a second 50mm wheel to the other end of the axle.

Check the wheels are straight and glue in place.

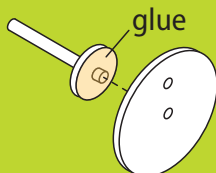
5 Assemble the cam wheel.



Cut a 50mm axle.



Fit a 25mm disc onto the end of a 50mm axle.



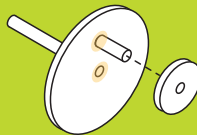
Apply glue and fit a 60mm wheel.



Check the end of the axle is flush with the surface of the wheel.



Glue and fit a 20mm axle. Check that it doesn't stick out the back.



Fit a 25mm disc onto the end of the 20mm axle.

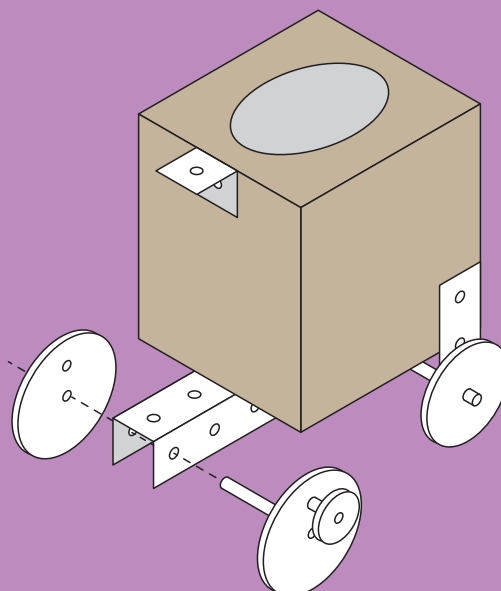


Check the assembly is straight and glue.

6 Fit the cam wheel.

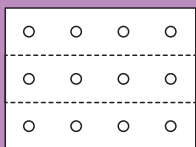
Pass the axle through the beam.

Fit a second 60mm wheel.



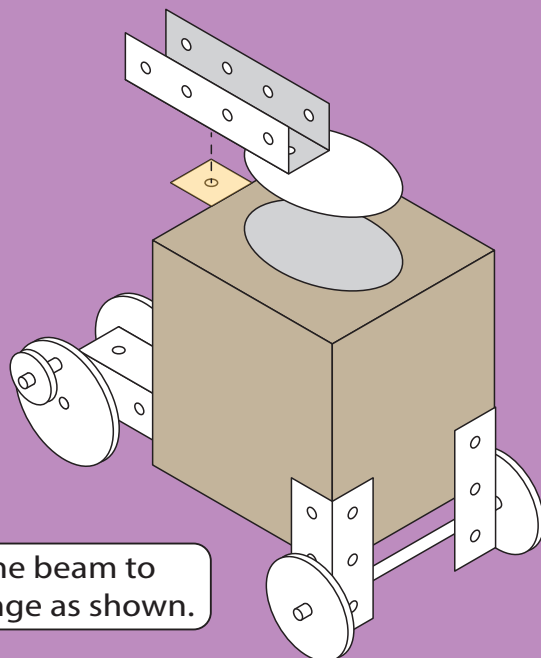
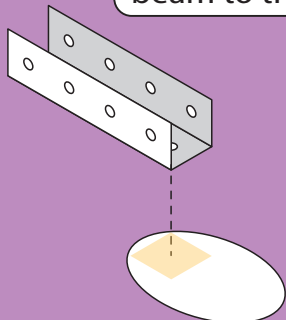
Check the wheels are straight and glue.

7 Fit the lid.



Cut a 100mm beam and fold to shape.

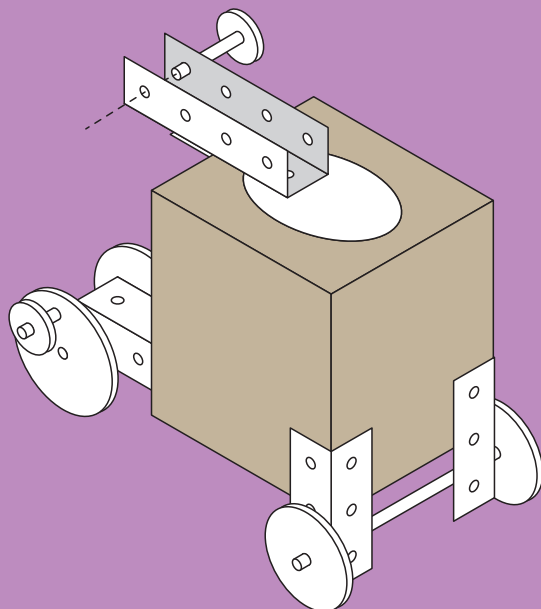
Glue the end of the beam to the lid.



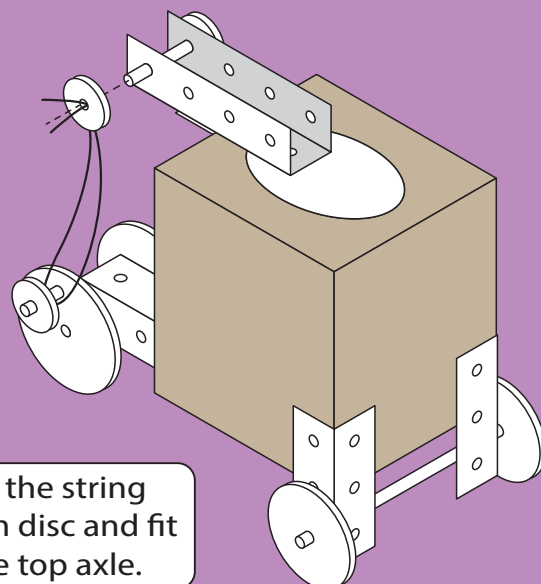
Glue the beam to the hinge as shown.

8 Fit the string.

Fit a 25mm disc to a 50mm axle. Fit the axle through the beam.



Loop the string around the lower axle as shown.

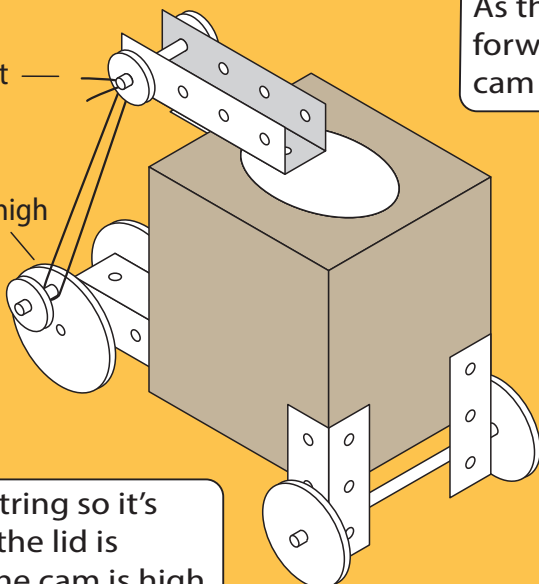


Pass the ends of the string through a 25mm disc and fit the disc onto the top axle.

9 Operate your Tissue Box Monster!

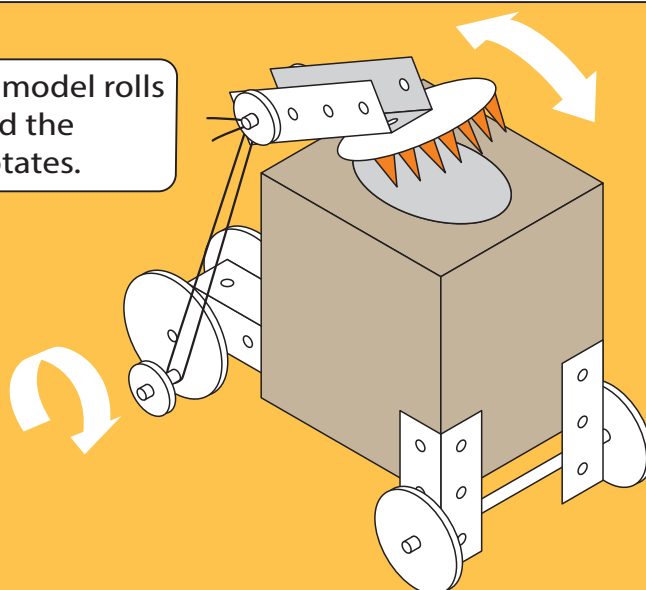
Pull to adjust

Cam is high



Adjust the string so it's tight when the lid is down and the cam is high.

As the model rolls forward the cam rotates.



The cam converts the rotating force into an up and down force.